

in a packaging suitable for this purpose, said packaging being moved for a given second distance synchronously with the feeding of the fish/fillet for the given first distance.

B1  
Amend.

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Remarks

The examiner's reconsideration of the application is requested in view of the amendments above and comments which follow.

Turning first to the rejection of claims 1 - 11 under 35 U.S.C. §112, the offending language identified by the examiner has been eliminated in the amended claims set forth above. Also, the claims have been amended to eliminate reference numerals and to reform them to be in accordance with U.S. practice, where the terminology "characterized in that" has been replaced by "in which". Otherwise, the language of the claims has not been changed, and the claims have not been changed in scope by the ministerial amendments set forth above.

The examiner has rejected claims 1 and 7 under 35 U.S.C. §102 as being anticipated by Spranger German reference number 135798. Claims 2 through 6 have been rejected by the examiner under 35 U.S.C. § 103 on the basis of obviousness, again with Spranger being the primary reference. While the indicated allowability of claims 8 - 11 is gratefully acknowledged, it is submitted that all claims are in condition for allowance, and reconsideration by the examiner is therefore requested.

Spranger (DL 0135798) discloses an automatic device to feed fish to processing machines at a level depending on the fish size, which size is the height according to the abstract and page 3 line 2, 3, 10, 15, 17, ... "Höhentaster", meaning a device to determine the height of the fish and

neither the length nor the weight of the fish. The apparatus is constructed to feed fish into a processing machine. In contrast, the present invention is a processing machine, cutting pre cut pieces of fish into slices to put in a retail package of desired measure or weight, the pieces being a side of a fish or a piece of a side.

None of the cited references describes an apparatus to cut slices in portions to make equal portions of weight in every retail package.

To obtain these equal portions of weight in every retail package, an adjustable feeding unit is provided. The feeding unit is a kind of conveyor as disclosed in DL 0135798 (Spranger), but Spranger teaches a delivery system determining the height (thickness) of the fish to be cut in halves (fillets) and does not disclose an apparatus where the angle of the conveyor determines the cutting angle of the knife.

Another feature which distinguished the closest prior art from the present invention is that most of the prior art references concern machines for deboning of fish, machines for removing head, fins and tail of fish or machines for cutting the fish into the most useful pieces without costly losses of meat.

The present invention is made to cut pieces of fish i.e. fillets into slices. The apparatus measures the length of the fish piece and (or) the weight of the piece, "whereby uniform slices are achieved, and where these slices can subsequently be handled and packed following a previous programme". (See specification page 2, lines 11 - 13).

Instead of regulating the angle of the knife, the angle of the conveyor/table on which the fish/fillets are placed is regulated, to achieve that the cut slices are uniform. (See specification page 2, line 20).

In the specification page 3, lines 6 - 17 it states, that the fish/fillets already **"have an approximately uniform appearance and cross-section regardless of the length and/or weight of the fish"** and further: **"the size of the slice remains the same by effecting an adjustment of the angle of the feeding table in relation to the actual cutting arrangement, and where the knife of the cutting arrangement forms an inclined angle with the fish/fillet itself during the actual cutting process and with the horizontal plane. The slice size is to be understood as the thickness measurement and the length measurement in the feeding direction. It will thus be the case that all other things being equal, the more plane the table is to the horizontal the longer the slice achieved"**.

The gripping means mentioned in claims 1, 3, and 4 are means for gripping **and** placing the slices after cutting. Not means for holding the fish/fillets during cutting or conveying through the deboning area or the like as described in the cited references. The gripping means are means for picking up the cut slices and placing the slices (eventually one by one). See the specification page 4, lines 15 - 21.

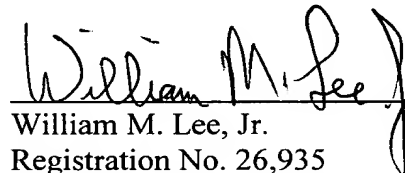
The cited references mostly process fish into fillets or pieces, which fillets or pieces may then be cut into slices by the apparatus according to the present invention.

Therefore, given the above and what is claimed in the present claims, it is submitted that the invention, as claimed, distinguishes from the references and is allowable thereover, whether the references are considered singly or in combination. Again, the indicated allowability of claims 8 through 11 is gratefully acknowledged, but in view of the above, it is submitted that the entire application is now in condition for allowance. Such further and favorable reconsideration by the examiner is urged.

As this response is being filed during the fourth month following the examiner's office action (October 20 being a Sunday), an appropriate petition for a one month extension of time is also submitted herewith.

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Respectfully submitted,

  
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**Version With Markings To Show Changes Made**

1. (Amended) Apparatus [(1)] for the cutting up of fish[, and fish fillets [and the like] in slices [etc.], comprising a feeding unit [(2)] which comprises means for the feeding of the fish/fillets, said feeding unit [(2)] conveying the fish/fillets to a cutting unit [(3)] which cuts the fish/fillets in slices, and [a unit (7) which comprises] means for the collection and processing of data, [**c h a r a c t e r i z e d**] in [that] which the means for the collection and processing of data comprise means for the registration of the length of the fish/fillet in the feeding direction and/or the weight of the fish/fillet, and [in that] the feeding unit comprises a plane [(9)] on which the fish/fillet is placed and fed forward, said plane forming a settable and adjustable angle to the horizontal plane, means [(5)] for the automatic adjustment and setting of the angle as a function of the length and/or the weight of the fish/fillet, and also a gripping device [(4)] which comprises means [(21)] for the handling of the slices from the area in which the cutting takes place.

2 (Twice amended) Apparatus according to claim 1, [**c h a r a c t e r i z e d**] in [that] which a sensor unit, preferably a photocell [(12)] is placed at a distance to the cutting unit [(3')] and opposite the feeding direction for the registration of the start area and the end area of each fish/fillet.

3. (Twice amended) Apparatus according to claim 1, [**c h a r a c t e r i z e d**] in [that] which the gripping means comprise at least one jaw [(21)] connected in a pivotal manner around an axis.

4. (Twice amended) Apparatus according to claim 1 [**c h a r a c t e r i z e d**] in [that] which

the gripping means [(22)] further comprise at least one jaw part which is displaceable in a linear manner.

5. (Twice amended) Apparatus according to claim 1, [**characterized**] in [that] which in the cutting area, securing elements are provided in the form of wheels/drums [(35)] with a periphery in which barbs [(36)] are mounted.

6. (Twice amended) Apparatus according to claim 1, [**characterized**] in [that] which the means for automatic adjustment comprise a microprocessor [(5)].

7. (Twice amended) Apparatus according to claim 1, [**characterized**] in [that] which the means for the setting of the angle comprise a motor [(18)] and a spindle [(19)].

8. (Amended) Method of cutting up of fish[,] and fillets [and the like] in slices, said fish/fillets being placed on a feeding unit and subsequently conveyed to a cutting unit where the fish/fillets are cut in slices, where each slice is removed from the cutting area before the cutting of a new slice, [**characterized**] in [that] which the feeding unit comprises a conveyor or the like which is set at a given angle in relation to the horizontal plane, said angle being adjustable during the cutting process, [and in that] the fish/fillet activates a sensor whereby the conveyor feeds the fish/fillet a given first distance, [and that] the cutting unit is activated for the cutting of the slice, and [in that] the slice is subsequently removed from the cutting area by a gripping device.

9. (Amended) Method according to claim 8, [**characterized**] in [that] which the

slice is removed by the gripping device with a combined linear and rotating movement of the device from a start position to an end position.

10. (Amended) Method according to claim 9, [**c h a r a c t e r i z e d**] in [that] which from its end position, the gripping device returns to its start position within a period of time, in which period of time the fish/fillet is fed forward a given first distance on the conveyor .

11. (Amended) Method according to claim 8, [**c h a r a c t e r i z e d**] in [that] which the gripping device places the slices in a packaging suitable for this purpose, said packaging being moved for a given second distance synchronously with the feeding of the fish/fillet for the given first distance.